

REMARKS

The comments of the Examiner as set forth in the official office action have been carefully studied and reviewed. In this response, claims 1 and 2 have been amended, claims 3, 5, 8, 9, 12 and 15 have been canceled, and new claims 21 through 34 have been added. For the reasons set forth above, it is respectfully urged that the present application is in condition for allowance and allowance is respectfully requested.

Claim 1 has been amended to correspond with the scope of claim 3 with the exception that the limitations formally found in claim 2, an intervening claim, have not been incorporated into claim 1. In particular, claim 1, as amended, calls for each mower deck to be movable through an angle of at least 91° in the course of moving from the operative position to the stowed position. This concept is illustrated in Figure 8 of the drawings.

Claims 1-3, 16, 18 and 19 stand rejected as being anticipated by the Miller et al. patent. In rejecting these claims, the Examiner notes that Miller teaches that each mower deck 67 moves through an angle of at least 91°. As support for that position, the Examiner points to col. 9, lines 67-72 of the Miller patent. The Miller patent at this cite provides:

The direction of this rotation is such as to cause the outer end portions of the lever arms 85 to swing upwardly, pivoting or swinging around the pivot shafts 83 so that when the pivot arms 84 have reached approximately vertical position, the lateral assemblies will have been elevated a very substantial distance.

Miller patent, col. 9, ll. 67-72.

This cite does not support the position that the mower decks of Miller are rotated through an angle of at least 91°. To the contrary, a close study of the Miller patent, and particularly the drawings therein, indicate that the mower decks are not rotated through an angle of at least 91°.

And indeed, because of the structure utilized by Miller and the inherent limitation of that structure, it is impossible for the mower decks of Miller to rotate through an angle of at least 91°.

Note Figure 5 of the Miller patent. Therein arm 85 is shown rotated between its extreme

positions. When the arm 85 assumes its near vertical position, note that the top of the mower deck is represented by the construction line that extends generally upwardly from the universal joints of the drive shaft. This construction line represents the top of the mower deck and represents its extreme position when lifted off the ground. More particularly, the upward pivotal movement of the mower decks is limited by a number of structural components. First, because of the very nature of the universal joint, indicated at numeral 35 in Figure 2, the mower decks can only be pivoted a limited amount. That is, the very nature of a universal joint will prevent a section of the drive from pivoting much past a 45° angle and certainly will not permit the drive shaft extending away from the universal joint to pivot past 90°. Another structural limitation in this case is the overlying frame structure of the Miller mowing system itself. It is virtually impossible for the mower decks to pivot past 90° because of the presence of the overlying structure.

Nowhere in the Miller patent is it suggested or disclosed that the mower decks are capable of pivoting through an angle of at least 91°. As noted above, the construction lines found in Figure 4 delineate the extreme position of the mower decks when they are lifted off the ground. Hence, claim 1, as amended, clearly defines over the Miller patent.

Claim 18 is also rejected as being anticipated by the Miller patent. As the Patent Office appreciates, in order to anticipate, the anticipating reference must show each and every limitation of a claim. In claim 18, paragraph (h) therein calls for:

wherein in the elevated stowed position each mower deck is turned at least partially on the mower deck side such that the underside of the mower deck faces outwardly and at least slightly upwardly.

As discussed before, the Miller patent does not show the mower deck rotated to a position where its underside faces at least slightly upwardly. As denoted by the construction lines in Figure 4, the most that can be said is that the mower deck faces outwardly to the side. Indeed,

as indicated by the construction lines, the underside of the mower deck, even in the extreme elevated position, faces slightly downwardly, not upwardly.

New claim 31 has been added. New claim 31 corresponds to former claim 17, which was indicated by the Examiner to contain allowable subject matter. It is respectfully urged that new claim 31 is in condition for allowance.

New claim 33 is drawn to a gang type mower system wherein the mainframe is provided with at least four wheels including a pair of rear wheels and a pair of front wheels, and a tongue that is pivotally mounted to the mainframe and is pivotable about a transverse axis. The Miller patent does not include the four wheel limitation, nor a tongue that is pivotally mounted above a transverse axis to the mainframe. By employing front and rear wheels on the mainframe and the separate pivotally mounted tongue, the gang type mower system of the present invention is able to move up and down over undulations in the ground without "scalping" the ground or turf. A review of the Miller patent clearly reveals that the mower system disclosed therein is designed to be utilized on straight and level terrain. Further, the patent emphasizes the ability of the Miller mowing system to be pulled at a fast rate of speed across straight and level terrain. Applicant's invention, as exemplified by claim 33, is more concerned with being able to make a uniform cut over hilly undulating terrain. The utilization of four wheels including a pair of rear and a pair of front wheels along with the tongue that is pivotally mounted about the transverse axis, enables Applicant's gang type mowing system to accomplish this objective.

The Patent Office also maintains that claims 4 and 5 as originally presented are obvious as being unpatentable over Miller in view of Allison. Claims 4 and 5 call for a belt drive and a belt tensioner for maintaining a tension on the belt drive. The Examiner acknowledges that the Miller patent does not show such a belt drive, nor a tensioner for a belt drive. However, the Examiner takes the position that the claimed invention of claims 4 and 5 would be obvious in view of the combined teachings of Miller and Allison.

The burden of establishing a prima facie case of obviousness is on the Patent Office. Satisfying that burden, the Examiner must make a finding that is supported by substantial evidence as to why a person of ordinary skill in the art would be motivated to alter the primary reference, which in this case is the Miller patent. The Examiner has failed to make a prima facie case of obviousness with respect to claims 4 and 5. First, the Examiner notes that the Miller patent does not include the belt drive, nor the tensioner. However, when the Examiner set forth the alleged motivation, the alleged motivation was based solely on including the tensioner of Allison, and not the belt drive of Allison. In particular, the Examiner argues:

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the tensioner of Allison on the drive of Miller in order to tighten the belt.

Here the drive of Miller does not include a belt drive, but a rigid drive shaft. Thus, the motivation articulated fails.

Even if the Patent Office would have proffered a motivation for combining the belt drive of Allison into the Miller mowing system, that would have failed in any event. Such teaches away from one of the principle objectives of the Miller patent. As noted above, the Miller mowing system is designed to be a high speed mowing system, that is the mowing system is designed to be pulled over terrain at a fast rate. That concept is reinforced throughout the Miller patent. The rigid drive shafts incorporated into the Miller mowing system make that possible. With the rigid drive shafts, there is no slippage and for every rotation of the rigid drive shaft, there is a corresponding rotation of the rotary blades. The same cannot be said for belt drives. Inherently there will be slippage in belt drive systems and they would be ineffective in a Miller-type mowing system. If incorporated into the Miller mowing system, one could anticipate that it would be difficult, at best, to cut grass effectively and still meet the high speed criteria and objectives of the Miller system. Furthermore, the Miller patent seeks to make the mowing system heavy. At column 1 of the Miller patent, the inventor notes that it is imperative that there be no skidding of the weight bearing wheels during turning operations. The inventor further


states that it is equally important that some means be provided to prevent serious bouncing of the mower while passing over relatively rough terrain at a high speed. The drive shafts of the Miller patent provide weight that prevent the mower from skidding and bouncing. If the drive shafts are eliminated in favor of a belt drive, the resulting mower system would be substantially lighter and much more prone to skid and bounce, and thereby conflict with principal objectives of the Miller mowing system. Thus, there would be no motivation to suggest substituting the belt drive system of Allison for the heavy and rugged drive shaft system found in the Miller mowing system.

For the foregoing reasons it is urged that the present application is in condition for allowance and allowance is respectfully requested.

Respectfully submitted,

COATS & BENNETT, P.L.L.C.

By:


Larry L. Coats
Registration No. 25,620

P.O. Box 5
Raleigh, NC 27602
Telephone: (919) 854-1844

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Name: Kathy L. Stehle

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